

## ABSTRACT OF THE DISCLOSURE

A high voltage generator provides high voltage signals with different regulated voltage levels. A charge pump generates the high voltage, and includes a quadrature phase forward and backward Vt-canceling high-voltage self-biasing charge pump with a powerup-assist diode. A high voltage series regulator generates the high voltage supply levels, and includes slew rate enhancement and trimmable diode regulation. A nested loop regulator eliminates shunt regulation.

Gray Cary\EM\7076159.1  
2102397-991180